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**OPERATIONAL LEADERSHIP FOR THE 21ST CENTURY:
THREE CHARACTERISTICS**

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper are my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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4 February 2002

ABSTRACT

OPERATIONAL LEADERSHIP FOR THE 21ST CENTURY: THREE CHARACTERISTICS

Information warfare, precision guided weapons, and interconnected systems present the operational commander with a new set of difficulties that he must manage in order to win on the battlefield. The operational commanders of today may look to history to see how their predecessors handled rapid advances in technology. They will see that successful operational commanders share three key characteristics: **superior professional and personal wisdom, clarity of vision, and moral courage**. The operational commanders that led the U. S. Armed Forces through the rise of air power in combat serve as a particularly useful group to study these attributes. These characteristics are timeless and apply as much today as they have throughout history. Leaders at all levels should strive continually to improve themselves in these three crucial areas during their careers if they want to lead effectively in the 21st century.

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INTRODUCTION

The operational commander is faced with more challenges in the 21st Century than ever before. His ability to understand these challenges and effectively overcome them is critical to success on the battlefield. Information operations, casualty and collateral damage aversion, near real time media coverage, asymmetric threats, and coalition warfare have combined to make the job of the operational commander more difficult than at any other time in history. What leadership skills will enable the future operational commander to succeed? Have information operations and recent technological developments fundamentally changed operational leadership, or are the lessons of the past still applicable today? Some light may be shed on these questions by looking into the past to another great technological revolution: the use of air power in combat.

Rapid advancements in information warfare, precision guided weapons, and interconnected systems have led some to believe that we are at the forefront of a technological “revolution in military affairs.” Whether or not one subscribes to this belief, these technologies do present new challenges with which the operational commander must contend. The emergence of air power between World War I and World War II also presented operational commanders with new challenges. They overcame these tests because they shared **superior professional and personal wisdom, clarity of vision, and moral courage**. These three characteristics are the most important for the operational leader of the 21st century to possess. They are as essential now as they were centuries ago. Wisdom enables the operational commander to perceive the goal, vision determines the way he will get there, and moral courage provides the strength to turn that vision into reality. All military officers should seek to develop these traits whether or not they seek combatant command. It is a

myth that great leaders are born, not made. While there is that rare individual whose natural ability carries him to great heights, one cannot become a successful operational commander without dedication, hard work, and continuous self-improvement. “The question becomes not one of how to become a leader, but how to improve one’s effectiveness at leadership.”¹

After World War I, the development of the airplane for use in combat sparked much debate. Most leaders of the day recognized its usefulness as a scout and artillery director, but a few visionaries saw greater possibilities. The debate raged throughout the inter-war period and beyond as to how air power may best be used in warfare. Much the same argument can be made for information warfare today. Most see the utility of having near real time access to data, but it is the visionary who can see the potential war winning uses for the technology. It is up to the operational leader to use his wisdom, vision, and courage to perceive the potential benefits of any new technology, and then apply them to the modern battlefield. It was because a few operational leaders of the past recognized the budding offensive power of the aircraft that the United States has the edge in almost every conflict; it will be the successful operational commanders of today that will enable the United States to maintain that edge.

To illustrate each of the three attributes, the example of a key operational commander who directly contributed to the rise of air power, and who best exemplifies that attribute will accompany each section.

THE THREE CHARACTERISTICS

Superior Professional And Personal Wisdom

Wisdom is the intelligent application of learning and experience. An operational leader’s wisdom and intellect allow him to sort through the chaos and “see” the future as he

would like it to be. There are many factors that may cloud the operational commander's thinking, not the least of which is the overwhelming amount of data available to him. Joint Vision 2020 expressly states, "Information, information processing, and communications networks are at the core of every military activity."² Information technology and the capability to collect and distribute information are increasing at an exponential rate. There is a finite amount of data that the human brain can process, and the collection capabilities that exist today far exceed that limit.³ The operational commander must use his experience and intellect to sort the wheat from the chaff.

Having the most information does not mean one has the most knowledge. Knowing how to make sense of that information is the key to wisdom. An operational leader should continually increase his base of knowledge through learning and understanding. The more a leader is able to do this, the better equipped he is to make consistently wise decisions. Building a base level of knowledge through reading and academic pursuits is the first step in the development of wisdom. It is essential that the operational commander continue to build upon a solid foundation of knowledge throughout his career. "All great captains in history, from Julius Caesar to Napoleon I, von Moltke, Sr., to Patton were known for their constant work to improve their professional knowledge."⁴

Experience is the second component of wisdom. "Practical wisdom is only to be learned in the school of experience. Precepts and instruction are useful so far as they go, but, without the discipline of real life, they remain of the nature of theory only."⁵

Experience is the ultimate teacher. "Without experience, leaders can only base their decisions on external sources of information (opinions, facts, case studies, etc) and almost always will choose the "statistically correct" solution."⁶ Experience reinforces what one has

previously learned. True leaders seek out chances to broaden their experiences at every opportunity. True leaders are not afraid to fail. Through failure the seasoned leader draws new insights and develops fresh opportunities for growth.

When a problem confronts the commander, he must draw upon his wisdom first to analyze the situation and then to develop an effective solution. In order to determine where he wants his organization to go, the commander must first understand the problem. For the operational leader of the 21st century this is easier said than done. He must adequately prepare his forces against a myriad of threats, from low level terrorist attacks to all out war using conventional weapons as well as weapons of mass destruction. “The operational commander must ... have broad knowledge of foreign policy, diplomacy, geopolitics, international economy, ethnicity, religions and other issues that shape the situation in a given theater.”⁷

Personal wisdom encompasses how well the operational commander knows himself. This is an often overlooked individual trait. It is vital that an operational commander knows his strengths and weaknesses so he can assemble a staff that complements his own abilities. “The common picture of the successful commander-in-chief is the lone genius like Napoleon Bonaparte or Frederick the Great. More often than not, this is an inaccurate picture.”⁸ If the operational leader knows that he is bold by nature, having a Chief of Staff who is more cautious may prevent him from choosing a course of action that is too high risk for the objectives. This theory only works, however, if the commander knows that he is bold by nature. If he is unaware of his tendencies, or chooses a Chief of Staff who thinks and acts like he does, he does not have a good sounding board for his ideas.

Wisdom: General Curtis E. LeMay

General Curtis E. LeMay was Commander in Chief, Strategic Air Command, from 1948 to 1957, and Chief of Staff of the Air Force from 1961-1965. It was General Jimmy Doolittle's respected opinion that LeMay was "the best air combat commander the US or any other nation ever produced."⁹ He is an excellent example of using wisdom to analyze a problem and create an innovative solution.

"He achieved his great triumphs by combining his powers of analytical thinking with a rigorous operational philosophy."¹⁰ He continually broadened his knowledge throughout his career. When he was a Second Lieutenant in the Army Air Force assigned to the 27th Pursuit Squadron, he studied celestial navigation and instrument flying even though there was no requirement to do so. While he did study tactics and strategies, the majority of LeMay's wisdom came from experience. LeMay felt that the only way to gain an appreciation for what was wrong was to go out and experience the problem firsthand. There wasn't a single mission or job that he would not or had not done. When bombing accuracies during World War II were poor, LeMay required his bomber group to fly straight and level from the initial point of the bomb run, through the target with no deviations in course, speed, or altitude. The rest of the Army Air Force thought the anti-aircraft fire over the target would decimate LeMay's group. Lemay's thinking was "that, overall, it was safer to fly a straight bomb run and knock the target out than to try to evade flak by jinking and have to return again and again."¹¹ Lemay, himself, led the first raid on Germany using this new tactic. As a result, LeMay's 305th Bombardment Group put more bombs on target than any other bomber group in the Army Air Force.

LeMay was always prepared to go to war today, but it was his preparations for tomorrow that made him the exceptional operational leader that he was. After World War II, there were many questions regarding the use of air power. Did strategic bombardment win the war in Europe and Japan for the Allies? In General LeMay's mind the answer was absolutely yes. He felt that the bomber, combined with the devastating effects of nuclear weapons, made strategic bombardment the strategy of choice for future wars. Even though the Soviet Union was an ally during the war, Lemay perceived that the next Great War might be fought against them.

The blockade of Berlin, and the Soviet Union's dominance of Eastern Europe made it clear that the Soviets meant to rival America's world power. It was then in 1948 that General LeMay took command of Strategic Air Command. It was as CINCSAC that he made his most lasting contribution to the security of the United States. He inherited a force of 52,000 personnel and 837 aircraft, of which, only 70 were front line bombers. "Lemay had a vision of SAC being so obviously powerful that that it would be perceived by the enemies of the United States to be unbeatable and so deter them."¹² When he finally left SAC nine years later, he turned over a force of 224,000 personnel and 2,700 aircraft. His wisdom in perceiving the Soviet Union as the next big threat and his ability to build the Strategic Air Command to deter that threat were essential to the United States winning the Cold War and bringing about the collapse of the Soviet Union.

When General LeMay became an operational commander the use of air power was not new in combat, but he took it further as a decisive instrument of warfare than it had ever been. He used air power to strike at the strategic heart of the enemy. Under his command

SAC became so powerful that the next Great War has not been, and hopefully never will be, fought.

Clarity of Vision

“Vision is key for any successful organization because it provides a “magnetic north,” a true direction for people to follow.”¹³ Very simply put, a leaders job is to lead. In order to do this one must know where to go and how to get there. Wisdom provides the where and his vision provides the way. A leader can “see” where he wants his organization to go and vision charts the course to get it there. “The leader has a clear idea of what he wants to do... and the strength to persist in the face of setbacks, even failures.”¹⁴

An operational commander must focus on very broad objectives and be able to realize the consequences of his actions on a grand scale. Restricting his thinking to the operational level is increasingly difficult for today’s commander. The amount of information available to him is incomprehensible. It ranges from the lowest tactical level to the grand strategic level. By maintaining clarity of vision, “the operational commander must possess a strategic or operational perspective on all aspects of the situation in a given theater.”¹⁵ From the moment an officer enters the service, and through much of his career, he is taught to think at a tactical level. Transitioning one’s thinking to the operational level is not a natural progression. One has to make a concerted effort to focus his thinking above the tactical level. “The senior leader’s job is to look at the larger picture and allow his subordinate leaders to address the details. Because a senior leader *can* have direct contact with the lowest echelon does not mean he *should*.”¹⁶

Thinking creatively is the key to vision. Secretary of Defense Donald Rumsfeld, in a speech to the National Defense University, urged the United States Armed Forces that, “We

have to put aside the comfortable ways of thinking and planning, take risks and try new things so that we can prepare our forces to deter and defeat adversaries that have not yet emerged to challenge us.”¹⁷ It is this kind of thinking that all branches of the armed forces must foster and encourage. Only by thinking creatively can we expect to counter the asymmetric threat posed by unknown enemies. Leadership at all levels must actively promote this kind of thinking. They must encourage their subordinates and staffs to take calculated risks without fear of reprisal if the outcome does not turn out as expected.

War-gaming is an effective way to expand one’s vision. Any military leader from the tactical level on up may war game many different options and scenarios to combat challenges. The more one practices and exercises the war-gaming process the more helpful it will become. Creative solutions may be attempted in the war-gaming arena to test new ideas and tactics. Patton’s extensive use of war-gaming enabled him to have a plan ready for the relief of Bastogne during his drive across Europe in 1944. Patton’s vision saved hundreds of lives and made possible the continued Allied march to Berlin.

Vision: Vice Admiral Joseph Mason Reeves

Vice Admiral J. M. Reeves was Commander in Chief of the U. S. Fleet from 1934-1936. Not much has been written about Admiral Reeves and he remains relatively unknown to this day. While Rear Admiral William A. Moffett is credited with being the “Father of Naval Aviation,” a case can be made that Admiral Reeves deserves as much recognition for the development of naval air power as Moffett. While Moffett deserves much of the praise for getting naval aviation off the ground, Admiral Reeves is the commander who developed the tactics that made naval aviation the decisive instrument in the War in the Pacific.

Reeves was first exposed to the offensive use of air power as a student at the Naval War College from 1923 to 1924. Vice Admiral William S. Sims, an outspoken proponent of the aircraft carrier and naval air power, had just been relieved as President of the War College and his lessons were still fresh in the minds of the students and faculty alike. Sims stated in 1925, “A small, high speed carrier alone can destroy or disable a battleship alone...the fast carrier is the battleship of the future.”¹⁸ Reeves became an avid war-gamer while at the War College, and it was through the course of these war-games that he envisioned an expanded role for the airplane and the aircraft carrier.

In 1925, President Calvin Coolidge appointed a policy board under Dwight Morrow to examine all aspects of military and commercial aviation. One of the key findings of the Morrow Board was that all commanding officers of aircraft carriers should be qualified aviators, a rule that is still in effect today. At that time, the Navy did not have enough qualified aviators senior enough to fill these positions. The interim solution was to provide interested senior officers a short course and qualify them as “naval observers” and, therefore, eligible for air commands. Reeves, then a 53-year-old Captain, was among the first to volunteer. Even at this early stage in naval aviation history, Reeves’ vision enabled him to see that the Navy’s future lay in the striking power of the aircraft carrier.

Reeves’ knowledge that the aircraft carrier was the future of the Navy was insightful, but what made Reeves a visionary was his development of tactics for the carrier and her embarked aircraft. Reeves’ first aviation command was as Commander Aircraft Squadrons, Battle Fleet. Following a six-week period of closely observing his air forces, Reeves called his officers together at North Island, California, and delivered a history-making lecture. He was blunt in his opinion that the aviators lacked insight into both the capabilities and

limitations of their weapons, and were, therefore, totally unprepared to conduct fleet air tactics. He then challenged his men to answer "Reeves' Thousand and One Questions," which were mimeographed sheets circulated to all squadrons. The answers to these critical questions, such as "How can we bomb effectively?" were analyzed, refined, and developed until the compilation of this work became "Aircraft Squadrons, Battle Fleet Tactical Instructions, 1928." This was the roadmap that would make believers of, "those old coots who command battleships,"¹⁹ as Reeves referred to those naval officers who did not believe in the aircraft carrier.

Reeves used his newly developed tactics while commanding a carrier force that included *USS Saratoga* (CV-3) during the much-publicized Fleet Battle Problem IX. By using high speed/ long distance steaming combined with pre-dawn aircraft launches and coordinated bombing attacks, Reeves was able to inflict a punishing blow to the forces defending the Panama Canal which included carriers and a small fleet. Reeves' vision laid the groundwork for the development of tactics that would help America defeat Japan a decade later.

Moral Courage

"Von Clausewitz differentiated between two kinds of courage: courage in the face of personal danger, and the courage to accept responsibility."²⁰ The first half of Clausewitz's statement may be considered physical courage that "is a permanent condition and is a prerequisite for any military leader."²¹ The second part of Clausewitz's statement defines moral courage. Moral courage is the strength of conviction that enables the operational commander to do what he believes is right regardless of the outside influences that are conspiring against him. Moral courage "...serves at least three purposes. It enables leaders to

withstand adversity, keep focused during chaotic situations, and provides the flexibility needed to handle change. Thus armed, leaders possess a valuable tool for use in their efforts to remain responsive and decisive, even during the most difficult situations.”²²

Decisions at the operational level, especially with the rise in information technology, are complex and characterized by uncertainty that can make a person who lacks moral courage shrink. Decisions that operational commanders make not only affect themselves, they directly affect all those working for them. Knowing that one’s choices could cost lives only makes these decisions harder. The successful operational commander of the 21st century must look past danger and uncertainty to see the end result of his actions. By using his wisdom and vision, he must then use his moral courage to carry through with his plans. By doing so, he will understand that while his actions may cost lives in the near term, they may end up saving lives in the long term. As Sun Tzu states in *The Art of War*, “If a general is not courageous he will be unable to conquer doubts or create great plans.”²³

Moral Courage: General Carl A. Spaatz

General Carl A. Spaatz was Commander U. S. Strategic Air Forces in Europe from 1944 to 1945 and the first Chief of Staff of the newly created United States Air Force from 1947 until he retired in 1948. Throughout the Air War in Europe, General Spaatz displayed unwavering moral courage. Every day Spaatz sent hundreds of fighters and bombers into the heart of Germany in a campaign to destroy German industry and attrite the Luftwaffe. German resistance was fierce and losses were heavy. However, gaining air superiority throughout Europe was the necessary first step to Allied victory.

The raids on Berlin in early to mid-1944 truly tested the perseverance of General Spaatz and clearly demonstrated his moral courage. “In its first major attack on the German

capital on 6 March, the Eighth (Air Force) lost 69 heavy bombers—the highest number ever lost on a single mission. On 8 March, the Americans lost another 37 bombers over the “Big B,” but the next mission saw no aerial opposition. By 6 June, the Americans had achieved daylight air superiority over Europe at the cost of over twenty-seven hundred bombers, almost one thousand fighters, and over 18,000 casualties.”²⁴ In the face of such a tremendous number of casualties, it is truly a wonder that General Spaatz could overcome such adversity.

General Spaatz had one more great display of moral courage prior to D-Day. In order to weaken German forces as much as possible prior to the Allied invasion of Normandy, General Eisenhower asked for proposals from his two air commanders. “Air Chief Marshall Trafford Leigh-Mallory and Eisenhower’s deputy supreme commander, Air Chief Marshall Arthur Tedder, advocated the transportation plan, which called for attritional bombing of the French and Belgian rail systems to render them incapable of allowing speedy reinforcement or easy logistical support of German forces opposing the invasion.”²⁵ Spaatz proposed bombing the petroleum refineries in Romania where Germany procured most of its natural oil, and then attacking the German synthetic oil refineries. Without oil, there was no way the Germans could mobilize any resistance to the Allied invasion.

Eisenhower eventually chose the transportation plan. Spaatz still felt that the targets that would do the greatest damage to the German war effort were the oil refineries. Having the courage of conviction, Spaatz resorted to deception to get his way. Since all refineries had a railhead collocated, he “targeted” the railheads at the Romanian oil refineries to conform to the transportation plan. Somehow in two consecutive raids on the railhead Spaatz’s bombers had a bad day and completely missed the target, but it just so happened that the bombs did a considerable amount of damage to the refineries. A few days later,

Spaatz met with Eisenhower and a heated discussion took place. The end result was that Spaatz was permitted to bomb oil refineries to gauge the German reaction and in exchange he devoted more effort to transportation bombing.

Spaatz's conviction was later vindicated after the first successful attacks on German synthetic oil refineries. Albert Speer, Minister of Armaments and Munitions, later told Hitler, "the enemy has struck us at one of our weakest points. If [he] persists at this time, we will soon no longer have any fuel production worth mentioning. Our one hope is that the other side has an air force General Staff as scatterbrained as our own."²⁶ Speer never got his wish. The bombardment of the oil refineries proved so successful that it was made the highest priority until the end of the war. Spaatz's conviction to bomb German oil refineries in the face of overwhelming opposition is a true indicator of his moral courage.

CONCLUSION

Technology alone does not win wars. It is the troops, led by operational commanders, who win the wars. Technology is a tool that the successful operational commander uses to maximize his combat power. Technological improvements and innovations have always been, and will always be, a part of warfare. Information operations and recent technological developments have not fundamentally changed operational leadership. **Superior professional and personal wisdom, clarity of vision, and moral courage** were the most important characteristics that made operational commanders victorious during the rise of air power. It is these attributes that will make them victorious in the future.

Personal wisdom is the ability of the commander to know his strengths and weaknesses so he may best optimize his relations with superiors and subordinates. By

optimizing these relations, he may then use his professional wisdom to envision the future. It is the operational commander's professional wisdom that allows him to determine where he wants his organization to go. Once the goal is set, he then uses his vision to chart the course that will enable the unit to reach that objective. Moral courage provides the strength to persevere in the face of adversity so that the unit may ultimately reach the goal.

Future military officers of all ranks need to pursue formal education tempered with real world experience, and then use their vision creatively to plan new ways to meet current and future challenges. Finally, they must stand by the courage of their convictions so that they can carry their plans to fruition. If they continue to do this, the United States will continue to produce the finest operational commanders in the world.

RECOMMENDATIONS

From this author's perspective, several recommendations concerning the development of future operational leaders are appropriate.

1. Formal academic schooling should be balanced with operational experience throughout an officer's career. The Services ought to view both formal education and job experience as equally important for the growth of its officer corps.
2. Promoting war-gaming is essential for officers to develop the necessary vision to think beyond the tactical level. War-gaming need not be a burden or a hindrance to action. It should be a systematic way of looking at problems and determining the best, most creative solutions. It can be practiced from the lowest tactical echelons of command all the way to the strategic levels.
3. Senior leadership should remove any barriers that would prevent subordinates from exercising creativity and independent thinking. The "zero defect" mentality that exists

in today's military stymies the willingness of officers to take risks. By promoting imagination and inventiveness, a leader may actually elevate the level of moral courage in his subordinates.

NOTES

¹ Warren Bennis and Burt Nanus, *Leaders: The Strategies for Taking Charge* (New York: Harper and Row Publishers, 1985), 225.

² Joint Chiefs of Staff, *Joint Vision 2020* (Washington D. C.: U. S. Government Printing Office, 2001), 8.

³ Lieutenant Colonel Anthony J. Russo, "Leadership in the Information Age," *Military Review* 79 (May-June 1999): 78-79.

⁴ Milan N. Vego, *Operational Warfare* (U. S. Naval War College, Newport, RI (NWC 1004), 2000), 566.

⁵ Samuel Smiles, Quoted in *Poor Man's College* [on-line]
<http://www.quotationspage.com/search.php3?homesearch=wisdom+experience&x=33&y=8>; Internet; accessed 2 February 2002.

⁶ Lieutenant Colonel Charles K. Bergman, *Challenge of 21st Century Leadership The Cornerstone and Future Building Blocks* (Air University, Maxwell AFB, AL, 1996), 70.

⁷ *Ibid.*, 566.

⁸ Captain Barney Rubel, *Operational Level Leadership* (U. S. Naval War College, Newport, RI (NWC 1032), January 1996), 5.

⁹ Walter J. Boyne, "LeMay," *Air Force Magazine* (March 1998): 62.

¹⁰ *Ibid.*, 60-62.

¹¹ *Ibid.*, 64.

¹² *Ibid.*, 65.

¹³ Lynne Joy McFarland, Larry E. Senn and John R. Childress, *21st Century Leadership* (New York: The Leadership Press, 1994), 94.

¹⁴ Warren Bennis, *On Becoming A Leader* (Reading, MA: Addison-Wesley Publishing Company, 1989), 6.

¹⁵ Vego, 568.

¹⁶ Russo, 78.

¹⁷ Thom Shanker, "Rumsfeld Asserts Forces Must Take Risks And Think Creatively To Prepare For New Challenges," *New York Times*, 1 February 2002, The Military.

¹⁸ Clark G. Reynolds, *The Fast Carriers* (New York: McGraw-Hill Book Company: 1968), 1.

¹⁹ Clark G. Reynolds, *Admiral John H. Towers: The Struggle for Naval Air Supremacy* (Annapolis: Naval Institute Press, 1991), 199. Quoted in William F. Trimble, *Admiral William A. Moffett Architect of Naval Aviation* (Washington D. C.: Smithsonian Institution Press, 1994), 8.

²⁰ Vego, 564.

²¹ Edmund A. Gibson, "Leaders and Leadership," U. S. Naval Institute *Proceedings* 3 (March 1954): 304. Quoted in Vego, *Operational Warfare*, 564.

²² Major Keith A. Caver and others, eds., *Ten Propositions Regarding Leadership* (Air Command and Staff College, Maxwell AFB, AL, 1996), 22.

²³ Sun Tzu, *The Art of War* trans. Samuel B. Griffith (New York: Oxford University Press, 1971), 65. Quoted in Michael I. Handel, *Sun Tzu and Clausewitz Compared* (U. S. Army War College, Carlisle Barracks, PA, 1991), 69.

²⁴ Richard G. Davis, "Pointblank versus Overlord: Strategic Bombing and the Normandy Invasion," *Air Power History* (Summer 1994): 12. Quoted in Richard G. Davis "Gen. Carl Spaatz and D Day," *Airpower Journal* 11 (Winter 1997): 1.

²⁵ Richard G. Davis "Gen. Carl Spaatz and D Day," *Airpower Journal* 11 (Winter 1997): 1.

²⁶ Albert Speer, *Inside the Third Reich* (New York: Macmillan, 1970), 346–347. Quoted from Richard G. Davis "Gen. Carl Spaatz and D Day," *Airpower Journal* 11 (Winter 1997): 1.

BIBLIOGRAPHY

- Bennis, Warren. *On Becoming A Leader*. Reading, MA: Addison-Wesley Publishing Company, 1989.
- Bennis, Warren and Burt Nanus. *Leaders: The Strategies for Taking Charge*. New York: Harper and Row Publishers, 1985.
- Bergman, Lieutenant Colonel Charles K. "Challenge of 21st Century Leadership The Cornerstone and Future Building Blocks." Unpublished Paper, Air University, Maxwell AFB, AL: 1996.
- Blades, Jon W. *Rules For Leadership*. Washington D. C.: National Defense University Press, 1986.
- Boyle, Gary S. "Combat Leadership Characteristics." Unpublished Paper, Air University, Maxwell AFB, AL, 1990.
- Boyne, Walter J. "LeMay." *Air Force Magazine* (March 1998): 60-67.
- Bracken, Paul and Martin Shubik. "War Gaming In The Information Age." *Naval War College Review* (Spring 2001): 47-60.
- Caver, Major Keith A., Major Craig A. Franklin, Major Peter H. Henson, Major Susan E. Hirst, Lieutenant Commander John C. Jenista, Major Seth M. Junkins Jr., Lieutenant Commander Michael D. McClure, and Major Innocent S. Phatshwane."Ten Propositions Regarding Leadership." Unpublished Paper, Air Command and Staff College, Maxwell AFB, AL, 1996.
- Davis, Richard G. "Gen. Carl Spaatz and D Day," *Airpower Journal* 11 (Winter 1997): 20-28.
- Handel, Michael I. *Sun Tzu and Clausewitz Compared*. Carlisle Barracks, PA: Strategic Studies Institute, 1991.
- Joint Chiefs of Staff. *Joint Vision 2020*. Washington D. C.: U. S. Government Printing Office, 2001.
- McFarland, Lynne Joy, Larry E. Senn, and John R. Childress, *21st Century Leadership*. New York: The Leadership Press, 1994.
- Reynolds, Clark G. *The Fast Carriers*. New York: McGraw-Hill Book Company, 1968.
- Rubel, Captain Barney. "Operational Level Leadership." Unpublished Paper, U. S. Naval War College, Newport, RI (NWC 1032), January 1996.

Russo, Lieutenant Colonel Anthony J. "Leadership in the Information Age." *Military Review* 79 (May-June 1999): 77-81.

Trimble, William F. *Admiral William A. Moffett: Architect of Naval Aviation*. Washington D. C.: Smithsonian Institution Press, 1994.

Vego, Milan N. *Operational Warfare*. Newport, RI: U. S. Naval War College, (NWC 1004), 2000.